

# Inside & Out

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COMPAQ® NEWS

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Connectivity: getting  
computers to communicate

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recalled by user

# Connectivity: getting computers to talk with each other



Barry Puls in Local Area Network (LAN) room at Chasewood II

**I** used to play 'telephone tag' all the time. I probably got through to whomever I was trying to reach less than 25% of the time," recently recalled Barry Puls, Release Manager for COMPAQ software products. "The rest were call-backs. You know: I call you, then you try to call me, then I try to call you again."

Or, Puls said, "I'd walk down to someone's office. They weren't there, so I'd have to find a sticky yellow piece of paper, write my message on it, stick it on their door and then walk back."

That was before 150 COMPAQ computers in Puls' department, Systems Engineering, were tied together in a "LAN" — a local area network — along with 110 others in Service, Information Management and hardware Engineering.

Puls' job sometimes requires him to coordinate the work of dozens of people. The network allows him to send a detailed, written message to all of them at the same time ... without suffering the delays and extra work caused by telephone tag.

Now imagine Puls' situation repeated ten thousand or a hundred thousand times in companies all over the world. That's part of the impact "connectivity" is having on people who use personal computers for business.

Although some local area networks exist at Compaq today, soon LAN connectivity is going to become familiar to

## **'Connectivity' is the year's hottest buzzword**

just about everyone at Compaq who uses a personal computer. A massive local area network will link most COMPAQ computers used throughout the company's headquarters campus. Fiber optics, thin strands of a special type of glass, which carry data in the form of light, are being installed for

voice communications at CCW, and will also carry computer data. This technology is being used in existing facilities.

The network also will provide links between COMPAQ computers and Compaq's six Hewlett-Packard mainframe computers. Some links, in fact,



**Kevin Dolan**

are already in use. Hundreds of personal computer users are currently linked to the corporate host computers through sophisticated multiplexing techniques; the LAN capability will be added to this. Global connectivity for Compaq is expected to be in place sometime in 1988. Even COMPAQ computers in overseas offices can "call up" one or more of the mainframes and exchange information with them by telephone.

### **Supporting connectivity**

Connectivity simply means connecting devices together so they can talk with each other. This can be done through modems, multiplexing, LANs or other means.

The devices can be almost any type of digital hardware: personal computers, printers, plotters, scanners, modems and the like. When these devices are connected to each other, it's called networking. When a microcom-

puter is connected to a mainframe, it's called a micro-to-mainframe link.

Connectivity is this year's hottest buzzword. Why now? Because until recently, the dream of free-flowing information was really a nightmare of complexity.

To get the feel of it, imagine dancing with several partners: one is doing the fox-trot, another is waltzing and three others want you to cha-cha. Your job is to dance perfectly with all of them at the same time.

Networking products must likewise keep in step with many types of devices, add-on boards and software all at the same time. Until recently, networking products weren't up to the task.

That's changing. Specialized hardware and software for networking has evolved. Business people who are moderately skilled in personal computer management can now handle the challenge of getting their machines to talk clearly and reliably with each other.

### **Connectivity means connecting devices together so they can communicate with each other**

As a result, many thousands of managers and other workers are enjoying the added productivity power of connectivity for the first time.

How do COMPAQ products fit into this worldwide sales trend? Connectivity and COMPAQ computers fit together extremely well, and not by chance.

"Optimum performance in a connectivity environment is a key issue right from the beginning of the design process," said Compaq Systems Engineer Kevin Dolan. "We test every new

COMPAQ product with different types of connectivity solutions — over 50-60 of them, including local area networks, terminal emulation boards, modems and multi-port boards — while our design's still in the 'breadboard' stage, months before it reaches the final (prototype design) stage."

Dolan adds that before any new COMPAQ product goes into production, it's field-tested under actual working conditions. Major accounts — large organizations that use many COMPAQ computers — put the new machine through its paces in complex corporate networks and micro-to-mainframe environments.

Dolan and other Compaq engineers also cooperate closely with engineers who work for other hardware and software manufacturers, to help assure connectivity of their products with COMPAQ computers.

If a connectivity question or issue arises, dealers call the Service hotline for telephone technical support. If the problem cannot be answered right away by the hotline technical specialist, it is escalated to other service specialists. If these people identify the problem as a compatibility or connectivity issue, they interface with the Systems Engineering Connectivity Lab. When the problem is resolved, the solution is relayed to the dealer.

### **A massive local area network (LAN) will link personal computers at Compaq; some networking is already in place**

If the support team hasn't seen a particular connectivity problem crop up before, says Compaq Systems Engineer Phil Reagan, the team attempts to duplicate it. This allows them to study it and find a solution.

# Company reports higher sales, earnings for second quarter

**C**ompaq Computer Corporation reported net income for the second quarter rose to \$31 million, a 219% increase over net income of \$10 million for the second quarter of 1986.

Earnings per share rose to \$.80, compared with fully diluted earnings per share of \$.31 in the corresponding period a year ago.

Sales for the second quarter of 1987, ended June 30, were \$268 million. This was an 82% increase over sales of \$147 million in the second quarter of 1986.

Net income for the first six months of 1987 was \$51 million of \$1.36 per share on a fully diluted basis, compared with \$18 million, or \$.57, in the first

six months of 1986.

Sales for the six-month period were \$478 million, compared with \$291 million during the corresponding period of last year.

These sales and earnings results for the second quarter of 1987 surpassed by far those of any previous quarterly period in the company's history. Compaq also shipped more product during this quarter than any other.

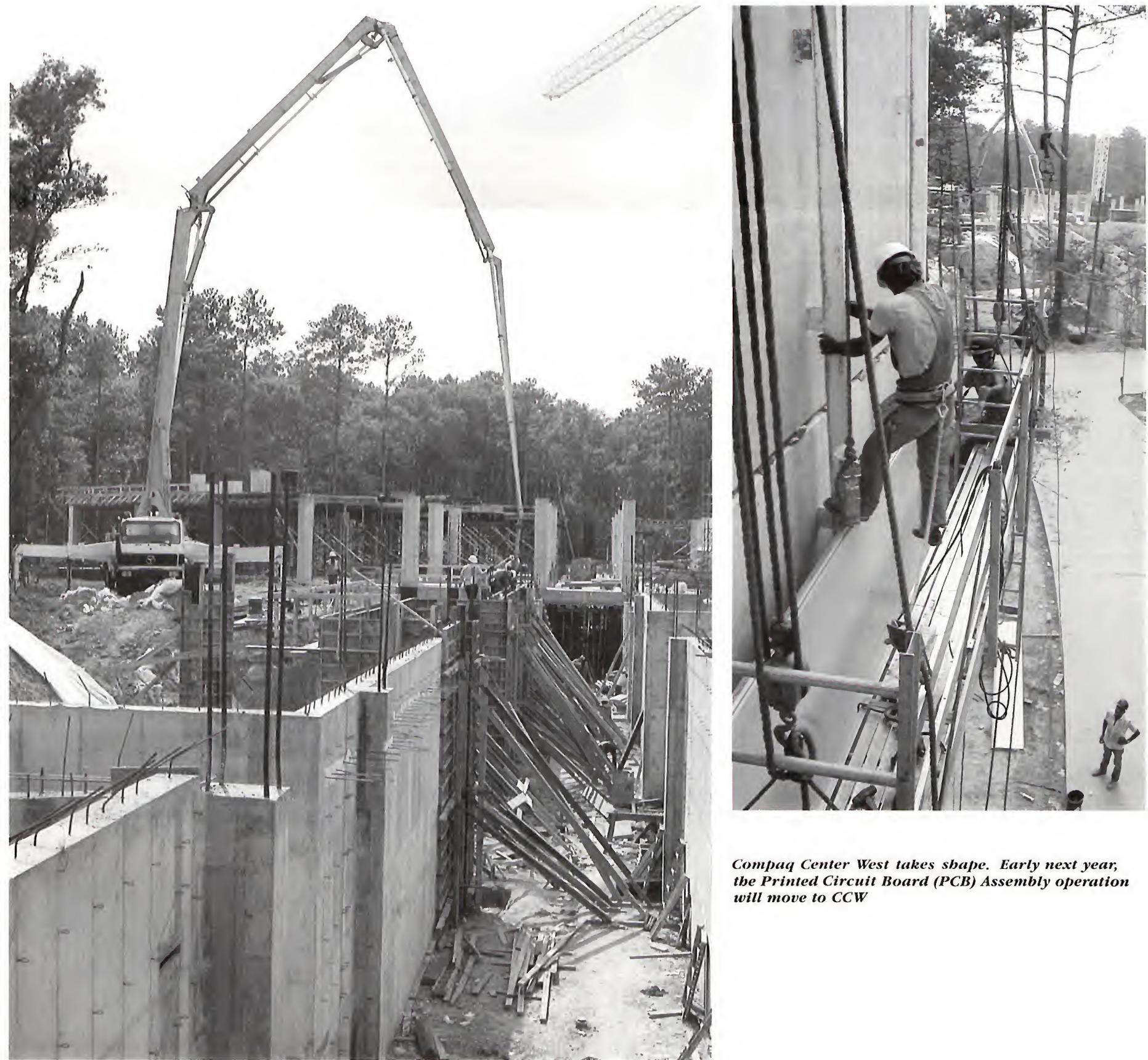
"Our record sales and earnings for the second quarter of this year stemmed largely from soaring demand for our industry-standard, high-performance personal computers," said Rod Canion, President. "Our two newest products, the COMPAQ PORTABLE III™ and the 12-

MHz COMPAQ DESKPRO 286®, led the way, with steep increases in sales each month. They have become the two most successful products the company has ever produced. And as the leader in 80386-based personal computers, our sales of the COMPAQ DESKPRO 386™ remain strong."

During the quarter, performance enhancements were introduced for existing products, including support for the Intel 16-MHz 80387 co-processor for the COMPAQ DESKPRO 386 and disk caching software for all COMPAQ fixed disk personal computers. Disk caching can substantially reduce the amount of time a user spends retrieving data stored on a computer's fixed disk.

Opening ceremonies were held during June at the Compaq printed circuit board facility in Singapore, the company's first manufacturing operations overseas. During the quarter the facility began producing boards and shipping them to the company's manufacturing operations in Houston for final assembly.

Compaq established a subsidiary in Madrid, Spain during the quarter to better serve the growing demand for COMPAQ products in that country. Including Spain, COMPAQ personal computers are available in 40 countries through a worldwide network of more than 3,000 full-service Authorized COMPAQ Computer Dealers.



*Compaq Center West takes shape. Early next year, the Printed Circuit Board (PCB) Assembly operation will move to CCW*

# Compaq announces OS/2 plans, support for software developers



**Jim Manzi of Lotus, left, talks with Bill Gates of Microsoft, right, at OS/2 briefing**

**E**arly in 1988, Compaq will offer the new OS/2 operating system, which is expected to unleash the power of its 80286- and 80386-based microcomputers.

In fact, Microsoft's OS/2 (MS OS/2) will become an important addition to the expanding industry standard in the

future, according to Compaq President Rod Canion.

The system will be offered for all 80286- and 80386-based COMPAQ Personal Computers.

Canion emphasized that a transition to OS/2 would evolve "over many years"; meanwhile, users will have

many choices in MS-DOS and OS/2 programs as software development continues for both.

Compaq also provides a Support Kit for developers of OS/2 software applications. More than 300 of these kits were shipped at no charge, beginning in June, to purchasers of the Microsoft OS/2 Software Development Kit.

***The COMPAQ DESKPRO 386 was the primary system used by Microsoft to develop OS/2***

An operating system is the software that directs a computer's operations. It basically offers a language with which a user can communicate with the computer. Most users of COMPAQ Personal Computers, or those using other brands of computers based on the same standards, employ Microsoft's MS-DOS as their operating system. A XENIX multi-user operating system, also from Microsoft, based on the UNIX system developed for mainframe and minicomputers, also is available for COMPAQ and other industry-standard personal computers.

The OS/2 operating system, to be released next year, enables the 80286 and 80386 microprocessors to perform more advanced functions.

#### Industry briefing

At a July 6 briefing in New York, sponsored by Compaq, leading figures in the PC industry joined to declare Microsoft's OS/2 the platform for the next generation of personal computer applications.

Compaq also hoped to clarify that the new operating system will run on a broad range of computers, and is not restricted to IBM's new PS/2 products. At this time, a version of OS/2 is not available for PS/2 products.

The briefing drew a larger crowd than expected, with approximately 250 people — primarily news media and financial analysts — standing shoulder-to-shoulder and overflowing into the adjoining hallway.



***A standing-room-only crowd packed the site of the OS/2 briefing in New York***



**Jim Ottinger of DCA, Rod Canion of Compaq, and Ed Esber, Jr. of Ashton-Tate presented their company's positions on OS/2**

"OS/2 will be responsible for a revolutionary advance" in benefits of personal computers, Canion told the group.

"An entirely new class of productivity and work-group applications" is possible because of these advances, he said.

Because OS/2 was announced in conjunction with IBM's new systems, officials from Compaq and the other companies represented at the conference felt it was not clear to end-users



**Lawrence Ellison, Oracle**

that the OS/2 system also would run on their products.

In fact, the COMPAQ DESKPRO 386 was the primary system used by Microsoft to develop its OS/2 system, noted William Gates, President, Microsoft Corporation. Prior to Microsoft's announcement of OS/2, Compaq also served as a test site for the system, trying it out in various applications.

"We believe benchmark tests will show that OS/2 will run better on COMPAQ 80286- and 80386-based personal computers than on any of the PS/2 systems available from IBM," Canion said.

Statements by 19 other companies were offered at the briefing, each indicating their companies plan to develop products to work with Microsoft's OS/2.

The top executives from five of those companies participated in the event, including Gates; Jim Manzi, Lotus Development Corporation; Edward M. Esber, Jr., Ashton-Tate Corporation; Lawrence J. Ellison, Oracle Corporation; and James Ottinger, Digital Communications Associates, Inc. (DCA).

Gates said early signs indicate good

acceptance by software developers. Microsoft has shipped 1,800 Software Developer Toolkits, and registered 1,300 attendees at its two major Developers Conferences.

He emphasized the operating system is suited to a broad range of industry-standard personal computers — not just IBM — and can serve well as a standard platform for a variety of applications including network, database and connectivity solutions.

Manzi stated that Lotus will offer protected-mode versions of Lotus 1-2-3, Symphony and other products for OS/2.

Oracle President Lawrence Ellison said his company is already in a position to provide database and networking management features to be offered in IBM's Extended Edition of OS/2, featuring its Structured Query Language (SQL). The program is due in late 1988 or 1989. It is a language which helps users access database information.

"Professional ORACLE (software program) is OS/2 SQL today," Ellison said. "Users don't have to wait for the Extended Edition of OS/2 to run SQL applications." Oracle offers SQL database software for mainframes and

minicomputers, and provides protected mode SQL database technology for personal computers.

DCA's Ottinger indicated his company will work to develop communications extensions for Microsoft's OS/2 that run on all COMPAQ 80286- and 80386-based machines.

#### Software development

The COMPAQ Support Kit enables software developers working on OS/2 applications to take advantage of COMPAQ computers' enhanced disk partitioning and a protected mode version of the internal tape backup.

It also allows developers to use their COMPAQ internal tape backup system to protect their work when developing OS/2 applications on COMPAQ 80286- and 80386-based personal computers.

The kit — which includes software utilities on a diskette and a documentation booklet, and entitles the user to technical support by phone — provides support to Microsoft's Software Development Kit, which also takes advantage of other features found on high-performance COMPAQ computers.

## Employee Purchase Program proves popular, adds hardware options

Since 1985, Compaq has offered eligible company employees the opportunity to purchase COMPAQ Personal Computers at discounted rates — as much as 50% off the suggested resale price.

The two-year-old program has been so popular, approximately 50% of the company's employees have used it to purchase new computers.

The program recently was expanded to add hardware options to the list of products offered.

Employee purchases can be paid for in cash or through payroll deductions.

Unlike the special sales occasionally held to clear overstocked invento-

ries of certain models that have been used internally, the Compaq Employee Purchase Plan offers discounted new computers year-round.

A few employee orders are backlogged now because of the overwhelming customer demand for the COMPAQ PORTABLE III and COMPAQ DESKPRO 286 Personal Computers. A backlog is created when orders for products exceed the available supply.

"Compaq has to place top priority on fulfilling Authorized Dealer requirements. This means Authorized Dealer orders must be filled first until product availability improves," explained Consuelo Adame, Assistant Program Manager.

To be eligible, you must be a permanent, full-time employee of Compaq for 90 days or longer, and based in either the United States or Canada. Each employee year, an individual can purchase a number of personal computers equal to the total number of immediate family members. An employment year begins on the date of hire. "Immediate family" includes the employee, spouse and children.

To order a computer, obtain an order form and price list from Employee Relations. Submit the completed form to the Order Entry Department at Compaq Center in Houston along with

your instructions for payment. A letter of confirmation will be sent within a week after the order has been accepted and approved. When the computer is ready for pick-up, you will be notified by phone; people outside Houston will have their units shipped to the address on the order form. No freight will be charged.

Computers purchased through the Employee Purchase Program receive the same warranties as those sold through dealers. At the employee's option, any product which needs repair — and is still under warranty — may be returned to the company's Brookhollow service center in Houston for repairs.

# 'Driver's nightmare'—computer owner recalls massive pileup

**Mr. Rod Canion**  
**President**  
**Compaq Computer Corp.**  
**20555 FM 149**  
**Houston, TX 77070**

**Dear Rod:**

*Recently I read an article in American Way magazine on you and Compaq. I have long been a professional admirer of your corporation, which has become a legend in our microcomputer industry. Your speech, however, reminded me of a long overdue personal extension of gratitude.*

**O**n Wednesday afternoon, January 4, 1984, John Farina was enroute to meet his wife, driving north in the far left lane of the Los Angeles Harbor Freeway. Traffic was fairly light. Sud-

denly, a collision in the far right lane sent a car flying across six lanes. It came to a stop when it hit the guardrail of the central divider — directly in front of Farina.



*A massive freeway pileup left John Farina's Porsche wrecked, but he and his computer were in good shape*



*COMPAQ PLUS survives wreck, scuffed but intact*

With no shoulder to maneuver to and the other lane blocked, Farina hit the car and the guardrail at 55 m.p.h. The result was a 15-car accident.

Farina's car was hit from behind by three cars and a water delivery truck. Other vehicles were involved in varying degrees and left scattered across the freeway. Several people were injured, none fatally.

It's every driver's nightmare: a major, multi-vehicle accident. For Farina, a California business executive and COMPAQ computer user, the experience taught him he'd made two wise decisions. He'd purchased a Porsche 944, which due to the car's metal and steel racing frame helped save his life, and a COMPAQ PLUS Personal Computer, which not only survived the collision but has continued to perform for over two years.

"It was over in a few seconds and the first thing I remember thinking was 'Hell, my antenna's broken,'" Farina recalled.

He turned off the car's ignition and radio, then unfastened his seat belt, only to discover that his side of the car was pinned against the guardrail. Fearing his engine might catch fire, he turned the ignition back on and tried lowering the power window on the passenger side of the car. To his amazement the window went down. Somewhat numbed, Farina experimentally closed the window and then opened it again before being pulled through the window "virtually unscathed."

Hours later, Farina bade his wrecked Porsche farewell at an L.A.

junkyard. Standing on a corner with his briefcase, COMPAQ computer, and a few other possessions from his car, Farina awaited his wife. When she arrived, the sight of the wrecked car left her shaken.

Although the couple celebrated Mrs. Farina's 30th birthday at a surprise party with close friends that evening, most of the attention was on her husband and his terrifying experience.

Back in his office as President of Quintar Corporation, "I was astounded to find that the Compaq Computer still worked," Farina said.

A recent experience reminded him of the accident of two years ago. During a product demonstration, Farina heard a rattling noise inside the computer. After shaking the computer and opening it up, a tiny piece of glass no more than a quarter-inch in diameter fell to the table top. Farina realized it was a glass shard from the Porsche's hatchback window, under which the computer had been sitting at the time of the accident.

Farina also realized at that time the computer had performed perfectly for more than two years, despite the glass inside. Today, he continues to use a COMPAQ computer in his work, and a Porsche to drive the streets of Los Angeles.

"I sold my wife's car right after the accident and replaced it with a comparably well-built car," he said.

"Since that time I have made a significant decision related to two well-built pieces of machinery: I entrust my life to Porsche and I entrust my business to Compaq."

## Two years later, firm using more COMPAQ Computers

Quintar Corporation was acquired in October 1985 by Bell & Howell, a publishing and information company. It is now a division of Bell & Howell, with John Farina still its president.

Quintar Division is a research and development operation which designs and manufactures computer graphics and imaging products. Its programmers use COMPAQ computers to develop software, while sales representatives from many Bell & Howell units use them to demonstrate their products.

Quintar originally purchased a COMPAQ PLUS—the one in Farina's accident—because at that time it was the only portable computer on the market with the expansion slots necessary to accept Quintar's graphics boards. Some of Quintar's products include image display controllers and software drivers that produce 35mm color slides

from COMPAQ and other computers. For example, a colorful chart from an accounting program could be reproduced in slide form using Quintar's software and slide printer connected to the computer.

Since 1984, Quintar's use of COMPAQ computers has grown from three COMPAQ PLUS Personal Computers to a total of 20 COMPAQ computers today. About half that number is the COMPAQ PLUS model, used by regional sales managers to demonstrate the firm's products. Quintar's programmers use COMPAQ DESKPRO 286 Personal Computers for developing the software.

Bell & Howell, the parent company of Quintar Division, also owns an estimated 500 personal computers, including many COMPAQ models.

# Publishing, CAD events draw enthusiastic response

**D**esktop publishing and computer-aided design (CAD) continue to be areas of intense interest for computer users. The level of interest was evident recently at two events hosted in London by Compaq Computer Ltd., which drew large crowds to examine products and applications for these two areas.

## **Compaq product sales into the CAD market are growing substantially in the U.K.**

Approximately 350 people gathered for an Executive Briefing on CAD, in which guest speakers described their experiences in selecting, installing and applying personal computer-based CAD systems. Software was demonstrated on high-performance COMPAQ computers, with third-party vendors displaying specialized hardware for CAD applications.

"Our product sales into the CAD

market are growing substantially in the U.K.," explained Simon Turner, Marketing Executive, Compaq Computer Ltd. "This is largely because of the price/performance of the 32-bit COMPAQ DESKPRO 386 and the upgraded 12 MHz COMPAQ DESKPRO 286. Also, the 80387 co-processor really helps in that market."

A week earlier, an event on desktop publishing drew 1,000 people, including a variety of media representatives, publishers and other end users. Software and hardware companies demonstrated their products, while seminars offered guidance on selecting, installing and using them.

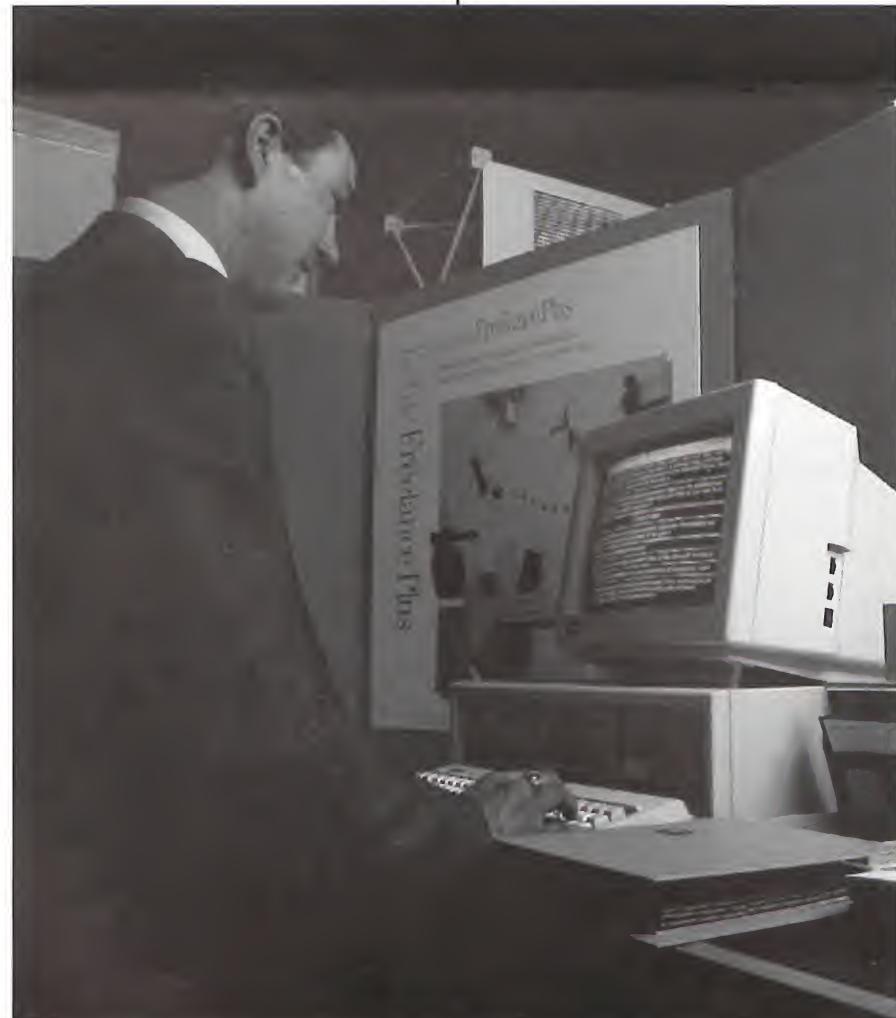
"This included 16 of the most professional desktop publishing and graphics companies in England," explained Deborah Gallo, Marketing Executive. "We let the customers walk around and decide which hardware and software solution was best for them. The response was so overwhelming, we will run this type of event again. Rather than holding a single event in London, however, we will offer them in regional locations."



*Desktop publishing demonstrations drew a large turnout in London*



*The market for CAD products is excellent in the U.K., where a Compaq seminar received excellent response*



*Guests tried out software and hardware to find desktop systems to fit their needs*

# French offices expand, more people added as activity increases



Paris—including the beautiful Champs Elysees—is beautiful but crowded, so Compaq offices in France are located in a suburb of Paris

**I**n early June, construction began on a new building for Compaq in France. Being built alongside the current offices, the new building will more than double office space for the French subsidiary when completed this October.

The construction started not a moment too soon, according to Robert Lyathaud, Operations and Logistics Manager.

"There is a tremendous increase in Compaq activity in Europe recently—especially in France," Lyathaud said. In March, Compaq Computer S.A.R.L. had only 30 employees. In just a few months, it will employ 64 people.

Lyathaud went on to explain the urgency of an expansion, noting that at most, only 50 employees could be accommodated in the current building. "We're very uncomfortable with three

people in an office which barely fits two," he lamented.

If you looked outside the window of the subsidiary's offices, you wouldn't see the Eiffel Tower or any of the other sites often associated with Paris. That's because the buildings are located in Les Ulis, a suburb approximately 15 miles (25 kilometers) south of Paris. Economies had a lot to do with that choice.

"Our same set of offices in downtown Paris would cost about five times as much," Lyathaud declared.

Finances were not the only consideration. When Compaq first came to France, the offices were in the center of the city, only blocks from the famed avenue, Champs Elysees. When it was time to expand, adjacent warehouse space was virtually impossible to find.

Another factor was traffic. "Rush hour was a big concern. We needed to

be away from the center of Paris for that reason, also," Lyathaud said.

The decision to relocate to Les Ulis put the company in the area which has acquired a reputation as the 'Silicon Valley' of France.

"It all started with Hewlett-Packard's move here 12 years ago," Lyathaud explained. Today, the suburbs south of Paris are populated by such companies as Apple and Microsoft, as well as companies working with artificial intelligence.

Although the company's French employees don't have to battle rush hour, they must depend on their cars far more than if they worked in Paris. Martine Gosse, Communications Administrator, said it was possible to travel from Paris to the offices in Les Ulis by public transportation, but the journey would involve subway, bus, foot and an hour's time, compared to only about 20

minutes by car. Workers must even take their cars out at lunchtime, as the closest restaurants are approximately one mile (2-3 kilometers) away.

Gosse estimates that over half of the French staff lives in Paris, and most of the rest live in the suburbs closest to Paris. Few, she believes, have any intention of moving closer to Les Ulis.

"In the suburbs, everyone's at home by 10 p.m. and the streets are empty. By contrast, Paris is alive and full of things to do. People who live in the suburbs do so because they prefer to be surrounded by greenery."

Gosse concluded that no matter where the offices were located or how crowded they got, the staff would overlook any inconveniences because they enjoy being a part of the dynamic, growing team, and look forward to the expansion of their offices.



Compaq offices are fairly new, but an expanding staff means also expanding the facilities



The company's French subsidiary will more than double its office space when additional facilities are completed in October

# New Canadian headquarters, distribution center readied

**I**n August, Compaq Canada Inc. will move into a handsome new corporate facility located in Markham, close to Toronto. The new facility will include 30,000 sq. ft. of space to be used both as offices and as a distribution center.

Randy Peterson, Canadian Marketing Manager, explained Compaq offices have been spread over three non-adjacent floors in an office tower in downtown Toronto.

The new offices will host sales meetings and corporate accounts, and offer "better focus and communications" by having people in the same location, Peterson said.

The new facility in Markham will not only pull together the 26 Compaq employees in Toronto; it will enable the company to start up its first Canadian



*Near Toronto, Compaq personnel will enjoy new headquarters and distribution facilities*



*Compaq Canada, Inc. headquarters will still benefit from Toronto's strong business climate*



*Randy Peterson*

distribution center. COMPAQ products destined for Canada have been shipped from Houston to the warehouses of Canadian dealers. The new distribution center will allow Compaq to track equipment more easily and check orders before sending them to dealers.

The move occurs at a time when the business climate, the demand for Compaq personal computers and the Canadian dollar all are strong.

This business environment represents a very important opportunity for Compaq to become a stronger presence in Canada, according to Peterson.

"Our reputation has been growing and demand for our products is high," he said.

Markham, northeast of Toronto, was selected because it is a dynamic

## ***'Demand for our products is high'***

center for business. Markham is very accessible to downtown Toronto, the airport, and residential areas, without tangling employees and clients in downtown or west Toronto traffic congestion.

In addition to the staff in Toronto, Compaq also has sales offices in Vancouver and Montreal. They serve as support centers for dealers in western and eastern Canada respectively.

# Assembly transporter floats on thin air

**A**nyone at Compaq Center Manufacturing on the last Saturday in June might have been excused for supposing illusionist David Copperfield — who performed at the COMPAQ PORTABLE III introduction — was once again spinning illusions for Compaq.

On that day, three 105-foot assembly transporter units were literally "floated" across the manufacturing floor to new locations 16 feet away.

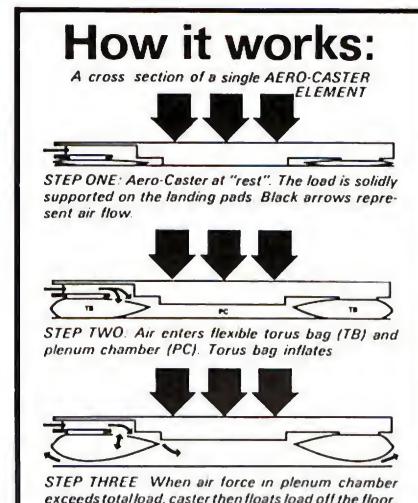
Lifted by a high-tech air pressure system and physically connected to the ground only by air lines, the 5,000-lb. units were gently guided into place to the amazement and jubilation of everyone involved.

"Last year we manually moved the same equipment and it took our crews 48 hours to move two units," said Mark Varsel, Facilities Mechanic and one of the key planners of the rearrangement. "This year we moved three units in less than 36 hours with smaller crews."

Every so often, when new products are manufactured or new pieces of machinery are added to production lines, crews work all weekend to rearrange thousands of pounds of equipment. The moves require that each assembly line, its work stations and utilities be broken down, physically moved and then reassembled, with over 100 electrical control lines in each unit spliced by hand.

Varsel knew there had to be a better way. He started asking vendors and other people they worked with for time-saving ideas. With the help of Dave Kinser — a representative from Allied American, which provides material

handling supplies such as conveyors and carousels to Compaq Manufacturing — Varsel discovered a 15-year-old technique that would move the long, heavy transporters in one piece.



**As air is forced through tubes and seeps under the rubber, an air film produces a 3/1000-inch lift**

Using equipment they had never laid eyes on before and that arrived just 24 hours before the scheduled move, Varsel and Randy Stubblefield, Senior Mechanic, designed a plan to place 12 two-inch-thick by one-foot-square aluminum plates with an inflatable tube on the bottom at strategic points under the transporters. Called Aero-Caster modules, they are made in several different sizes to accommodate various weight loads, but all operate on the same principle.

When the modules are placed under an object and the tubes are simul-



**Facilities personnel completed the equipment move in record time, with smaller crews, using a big-tech air pressure system**

taneously filled with compressed air, they seal against the floor and inflate to provide up to a 3/4-inch lift. As more air is constantly forced through the center of the tubes and begins to seep under the rubber, an air film between the cushion and floor produces a 3/1,000-inch lift.

Aero-Casters have been used to move objects as large as bleachers at Denver's Mile High Stadium, and are frequently used to move conveyor systems. But initially, few people believed the technique could be applied to the assembly units at Compaq due to their length and lack of rigidity. In order for the Aero-Casters to work properly, the units had to be stable and the entire length lifted in unison to avoid buckling.

In fact, the Aero-Caster modules are guaranteed to work by their manufacturer, Aero-Go, Inc. of Seattle (for which Allied American is a distributor), if the user can guarantee that the object will remain stable. Stubblefield's millwright experience told him that with proper bracing and correct placement of the modules at major stress points the plan would work.

With the go-ahead from their supervisors the crews, under the organization of Shelby Brady, Senior Facilities Mechanic, were given until midnight

Sunday to complete the job. All three transporters were moved before noon Saturday, not including reassembly of the work stations and utilities, without a single hitch.

"I thought it worked out wonderfully well," said Jim Rector, Systems Installation Manager.

"It was a new application to a problem we address often and it allowed us to finish a moving schedule we had some doubts about. We even had time to spare."

## **System supports equipment with air film**

If the technique had failed, Facilities supervisors at Compaq Center would have allowed exactly 60 minutes to work out any problems before abandoning the Aero-Caster technique and ordering a traditional physical move. Varsel credits the teamwork of the entire Facilities group for the smooth operation. What next for the heroes of heavy-duty hauling?

"In about seven months we'll be moving the same equipment from Compaq Center Manufacturing to new facilities at Compaq Center West, and we're already looking at how to move the equipment from the building onto trailers using the Aero-Caster system," Varsel said.



**This assembly transporter unit was literally floated into its new position**

# Seen in the press



*Rod Canion, Compaq President, addresses media and financial analysts at New York OS/2 briefing*

**F**orcing customers to choose between the PS/2 models and PC compatibles sooner than many expected, IBM Entry Systems Division president William C. Lowe said at a briefing of financial analysts that IBM would close out its XT 286 computers within 60 days, and it would decide within the next few weeks how many AT 339s to build before closing down the manufacturing of that model.

*Info World*  
June 29, 1987

"Compaq Computer Corp. indicated it expects to report that second-quarter net income nearly tripled to at least \$25.5 million because of continued strong sales — despite uncertainty in the personal computer markets..."

"Sales for the period 'exceeded \$250 million,' Mr. Canion said...The increases — similar to gains the company has registered in previous quarters — indicate that Compaq's products are faring well despite new competition and uncertainty created by International Business Machine Corp.'s new line of personal computers that debuted on April 2..."

"Mr. Canion attributed the company's second-quarter sales growth to 'acceptance of the company's front line products (COMPAQ DESKPRO 386, COMPAQ DESKPRO 286 and COMPAQ PORTABLE III)'...Mr. Canion was cautious, however, about drawing conclusions regarding the success of the new IBM line. 'I'd hesitate to go beyond (our) numbers and say this is proof of anything. But it does clearly say there are a

lot of buyers out there who haven't switched over' to the (new) IBM models, Mr. Canion said."

*The Wall Street Journal*  
July 1, 1987

"Compaq Computer Corp., hoping to ease doubts about how well its personal computers will fare against IBM's new Personal System/2 line, said its second-quarter results will be substantially above analysts' projections..."

"Compaq's announcement came just one week after IBM had made similar bullish statements about its PC sales. The recent statements by both IBM and Compaq seem keyed to putting down rumors about slowed PC sales..."

"My own sense is that the upturn in the PC business is very strong," said Benny Lorenzo, L. F. Rothschild research vice president. "I'm looking for expansion (annual growth) in the 25 percent range. Compaq is certainly gaining market share and IBM has said it is growing faster than the industry."

*Computer Systems News*  
July 6, 1987

"Compaq is fighting an increasingly feisty battle for the hearts and minds of computer buyers.

"At a news conference scheduled for today at the Marriott Marquis Hotel in New York, Compaq will roll out

some computer industry royalty — its own president, Rod Canion, plus a triumvirate of software princes: Chairmen Williams Gates of Microsoft Corp., Edward M. Esber of Ashton-Tate Co. and Jim P. Manzi of Lotus Development Corp. The purpose: to put out the word that the new line of computers from International Business Machines Corp. hasn't locked COMPAQ computers out of important future advances in software.

"The Houston-based company appears to be trying to clear up confusion about the operating system software, called OS/2, to be released next year by Mr. Gates's Microsoft. An operating system is the underlying software that directs the computer's operations. Applications software, such as spreadsheets and word processors, is written to fit 'over' the operating system.

"OS/2 was introduced April 2 along with the new line of computers from IBM. While it isn't out yet, Microsoft says it will run on computers currently available, like those made by Compaq and others, as well as on the new IBM models that deviate in some ways from the standard design that Compaq uses..."

"If buyers are confused, it isn't surprising. For one thing, the new IBM line is, not coincidentally, called PS/2. What's more, while Microsoft has done most of the development on OS/2, IBM is making some slight alterations and will put out its own version, called IBM OS/2. In its public statements, IBM hasn't denied that OS/2 will run on computers made by Compaq and others, but it says the system will run faster and with clearer graphics on the new IBM line.

"Industry watchers say IBM may well be right that OS/2 will run better on the new PS/2 line, which includes some hardware enhancements that other computer makers don't have yet. 'But OS/2 won't even be out until next year,' said Seymour Merrin, an independent consultant in Southport, Conn.

"There is nothing, zero, zilch, to make me think that others won't figure out ways to match the IBM performance by then."

*The Wall Street Journal*  
July 6, 1987

"... Lotus president Jim Manzi said (at New York press conference) that 'the best way to address' end users is 'by promoting choice.' He said Lotus will try to tie together new and old components of its existing installed base of almost 3 million copies of 1-2-3 and Symphony by providing new versions that run on DOS and OS/2 in protected and real mode..."

"Ashton-Tate's Esber... said that users will be able to choose between IBM's proprietary OS/2 Extended Edition and 'a better, far more powerful database from Ashton-Tate.'"

*MIS Week*  
July 13, 1987

"The top executives of Compaq Computer, Microsoft, Lotus and three other leading software firms strove last week to assure corporate PC users they have nothing to gain by waiting for IBM's PS/2 in order to run either OS/2 or IBM's succeeding proprietary version of the operating system.

"Seeking to eliminate user uncertainty, they reiterated their support for the generic OS/2 developed by Microsoft and further indicated they would ignore IBM's extensions in the belief they would serve only limited niche applications that independent software developers would probably do a better job than IBM in filling..."

"OS/2 has the potential to become the industry's primary operating system as it gradually unleashes the power of the 286 and 386 architectures," (Canion said)... This will be a smooth, evolutionary process over many years."

*Electronic News*  
July 13, 1987

## Thu Le remembered as 'top performer'

Thu V. Le, who joined Compaq manufacturing operations in 1985, died May 30 in Houston as the result of an auto accident.

Le, 34, worked as a line operator in the Desktop Assembly group at CCM.

"He was a top performer," said Wanda Riemer, Production Supervisor. "Our group took his death real hard."

Funeral services were held June 3, at Forest Park Funeral Home — Westheimer, with interment at Forest Park Cemetery.

Le is survived by his parents, Mr. and Mrs. Luong Van Le, six sisters and three brothers. He was a member of Notre Dame Catholic Church.

# PREVIEW

**“P**review” offers a calendar of company activities. To submit your group's activities for the August issue, please send the information to Vicki Henegar, Houston, mail code M010, by July 6.

## TRAVEL

A trip to Jamaica is planned for Labor Day weekend, Sept. 4-7, sponsored by the ACE Travel Club. Only 19 seats are available, so reservations should be made as soon as possible. For more information, contact Wendy Simon, 374-1496.\*



## INDIVIDUAL FITNESS

A total of 85 people have signed up to try out for 24 positions on the company's **Corporate Challenge** team. The 12 men and 12 women chosen

will compete Aug. 29 against other corporate teams — including IBM, NASA, Continental Airlines and Arthur Young — to benefit the Cystic Fibrosis Foundation. Each participant will compete in 2-8 events, ranging from swimming, golf and volleyball to Frisbee toss, sack races and relay races (in which participants wear flippers). The winning team will go to Hawaii in October to compete in the international contest. Coaches for the Compaq team are Cleveland Joseph and Jeff Wilcox. Tryouts also will be held for a Compaq

cheerleading squad, under the direction of Melissa Nix. For more information on the Corporate Challenge, contact Ruth Howard, 374-5602.\*



Discount tickets for the annual **Renaissance Festival** will be offered again this year through ACE. Contact

**DISCOUNTS**  
**Gold C**  
**Coupon Books** for 1988 will be available the first week in August, offering discounts at many area firms. For information, contact the ACE Hotline, 374-2414.\*

the Employee Services volunteer at your location to obtain tickets.\*

**Astroworld** tickets purchased through ACE also may be used at Six Flags over Texas in Dallas. The tickets may be purchased from your Employee Services volunteer.\*

**Dining Dollars**, offering discounts for food and beverages at area locations, may be obtained through Employee Services.\*

A list of **Houston area merchants** which provide discounts to Compaq personnel may be obtained by calling the ACE Hotline, 374-2414, or sending a request for a copy to ACE Employee Services, mail code M995. ACE does not endorse any merchant and is not responsible for the results of any transactions.\*



*Nancy Hardy plays computer chess, which may be checked out from the ACE Chess Club. The group meets once a month*



*Jim Decker concentrates on his next move as he prepares for the next ACE chess tournament, set for Aug. 22. To register, contact Decker at 374-1944 for an entry form*



Activities marked with an asterisk\* are sponsored by the Association of COMPAQ Employees (ACE). All full-time, permanent COMPAQ employees in Houston are part of ACE. Details on activities and registration forms may be found in ACE reader racks at each Houston site.

## ABOUT THE COVER

One of the year's hottest buzzwords — connectivity — simply means connecting devices together so they can communicate

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